

No. I.

Dates of the Votive Inscriptions on the
Stupas at Sanchi

BY

RAMPRASAD CHANDA, B.A.

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DATES OF THE VOTIVE INSCRIPTIONS ON THE STŪPAS AT SĀNCHĪ.

FOR ascertaining the age of the stūpas, railings, and gateways at Sāñchī that have been aptly described as "the noblest of all the monuments which early Buddhism has bequeathed to India," one of our main guides is the chronological indications of the forms of letters employed in the votive inscriptions. This fact was fully recognised by Cunningham who discerned an earlier and a later variety of Brāhmī alphabet in these epigraphs. He writes about the inscriptions on the railing, "The date of the colonnade or railing might be determined approximately to belong to the age of Aśoka, by the alphabetical characters of the inscriptions, which are exactly similar to those of the pillar edicts."¹ About the inscriptions on the gateways of stūpa I Cunningham writes, "The fact that the gateways are of later date than the colonnade or railing, is confirmed by the more recent character of the inscriptions, which approaches that of the Sāh coins of Gujrat."² Cunningham identifies King Siri-Sātākarni mentioned in an inscription on the south gateway with the third king of the Andhra dynasty whom he places between 19 and 37 A.D. Bühler agrees with Cunningham in distinguishing an earlier and a later variety of alphabet in the votive inscriptions, in assigning the earlier inscriptions to as early a period as the edicts of Aśoka, and in identifying Siri-Sātākarni of the Sāñchī gateway with the third king of the Andhra dynasty. But Bühler assigns the inscriptions on the gateways to the second century B.C. and classifies them with the inscription on the gateway of Bharhut and the Nāgañāth inscriptions which he places in 120 B.C. in his Table II.³ While the older and the later groups of the Brāhmī inscriptions of the monuments at Sāñchī are easily distinguishable, the former occurring on the railing of stūpas I and II, on the pavement slabs of stūpa I, on the stone reliquary of stūpa II, and on the pillars unearthed from the site of Temple 40, and the latter on the four magnificent gateways of stūpa I, on the additional railings attached to the south, east and north gateways, and on the remains of the

¹ *The Pillar Temples*, London, 1854, p. 271.

² *Ibid.*, p. 272.

³ *As. Ind.*, Vol. II, pp. 28-29; *Ibid.*, Vol. XXVIII, Appendix, p. 22; Bühler Table II, columns XVII and XVIII-XXIV.

ground railing of stūpa III,—the views of both Cunningham and Bühler regarding the dates of these groups seem to be open to objections.

I.

To begin with the older group, they appear to be later in date not only than the edicts of Aśoka, but also than the Nāgārjunī hill cave inscriptions of Aśoka's grandson Daśaratha (Pl. I, Nos. 1-3), and, perhaps somewhat later also than the Besnagar pillar inscription of Heliodoros, Ambassador of Antialkidas (Pl. II).¹ A comparison of the four test letters *a*, *bha*, *ra* and *ha* points to this conclusion.

1. According to Bühler and other authorities Brāhmī *a* is but the oldest Phoenician Aleph (𐤀) turned from right to left with transposition of the vertical to the end of the angle (𐤀).² This angle formed by the two arms of *a* meeting at a point on the vertical line is the characteristic of almost all the *as* and *ās* in the edicts of Aśoka, and *as* and *ās* with arms that do not meet, but leave a little intervening space on the vertical line (as in line 5 of the Sānchī pillar edict, *Ep. Ind.*, Vol. II, Plate facing p. 369) are exceptional. As *a* or *ā* with an angle occurs side by side with *a* or *ā* with a space between the arms on the vertical line in the Aśoka edicts, neither type can be considered a local variety, but the latter may be recognised as an irregular form of the former. In the Nāgārjunī hill cave inscriptions of Aśoka's grandson Daśaratha (Dashalatha) the arms of all the *as* (𐤀) and *ās* make a sharp angle on the vertical line. All the *as* in the Besnagar pillar inscriptions have considerable space between the arms (𐤀). In the older votive inscriptions of Sānchī *a* with space between the arms is the rule and *a* with an angle made by the arms is the exception. If the theory that the Brāhmī *a* is but the old Phoenician Aleph turned from right to left with the vertical line removed to the end of the angle is right, *a* with angle should be recognised as earlier in form, and epigraphs in which *a* with space between the arms predominates should be considered later in date than those like the edicts of Aśoka and the inscriptions of Daśaratha in which the earlier form predominates.

2. Most of the *bhas* (𑀧𑀺) of the Aśoka edicts consist of two lower verticals with a horizontal line above them extending a little beyond the top of the right vertical, and with an upper vertical line attached to its right end. But here and there we meet with *bhas* of two other types in which the horizontal line is not extended beyond the right lower vertical, and the right lower and upper vertical lines meet and either make an angle or form one straight line. In the edicts of Aśoka these last two types of *bha* (𑀧𑀺𑀭𑀺) are so rare and often occur so near *bhas* of the first type with extended horizontal line, that they appear to be but irregular forms due to the negligence of the engraver. In the Nāgārjunī hill cave inscriptions of Daśaratha all three types of *bha* are met with. In the *bhas* (𑀧𑀺) of the Besnagar pillar inscription of Heliodoros the right lower and upper verticals meet and make an angle. In the older Brāhmī votive

¹ *A. S. R.*, 1905-06, Pl. II, pp. 128-29, and Pl. XLVI.

² Bühler, *Indian Palaeography* (Eng. tr.), p. 12.

inscriptions of Sāñchi the regular Aśokan *lā* (𑀭) with extended horizontal line is practically absent, and almost all the *lās* have one single long right vertical line. As a regular monumental form this latter type of *lā*, which is found also in all decidedly later inscriptions, indicates that the older votive inscriptions of Sāñchi are somewhat later in date than the Besnagar pillar inscriptions.

3. *Ra* occurs only in the Girnar, Suddapur, and other South Indian versions of the rock edicts of Aśoka. In the North Indian edicts, whether on rock or pillar, engraved in the Brāhmī script, and in the inscriptions of Daśaratha, *la* is substituted for *ra*. As the Brāhmī *ra* is traced to the oldest Phoenician *Reh* (𐤠) with the triangular head opened and the vertical attached to the base of the triangle, the primary form of *ra* is a straight line with a hook at the top as in *morā* (𑀭𑀸) in the Girnar Edict I, line 11 (*Ep. Ind.*, Vol. II, Plate facing p. 446). But other types of *ra* are also met with in the Aśoka edicts, such as the ornamental cork-screw type (𑀭𑀸), and an irregular type approaching a straight line (𑀭𑀸). The cork-screw type is the most common one in the edicts of Girnar and Suddapur. In the Besnagar pillar inscriptions most of the *ras* are cork-screw like (𑀭𑀸). But in the older votive inscriptions of Sāñchi *ra* is represented by a straight vertical line (𑀭). This straight-lined *ra* is also met with in all decidedly later Brāhmī inscriptions including those of the Kshatrapas and the Kushans. So the straight-lined *ra* of the older votive inscriptions of Sāñchi also points to the conclusion that these are later in date than the Besnagar pillar inscription of Heliodorus.

4. Two types of *ka* are met with in the edicts of Aśoka, often side by side. The more common type has the small horizontal line attached to the right (shorter) arm a little below its top (𑀭𑀸). In the second type this short horizontal line is attached to the top of the shorter arm (𑀭𑀸). As this second type is also found almost exclusively in some of the pillar edicts, such as those of Radhia, Mathia, and Rāmpurva (*Ep. Ind.*, Vol. II, p. 215 ff.), both the types of *ka* may be recognised as regular monumental forms. But if *ka* is derived from the Aramaic *He* (𐤀) turned upside down and from right to left, the first type of *ka* (𑀭𑀸) should be considered as the more archaic. In the Nāgārjun hill cave inscriptions of Daśaratha all the *kas* are of this archaic type. So the total absence of this form of *ka* in the older votive inscriptions of Sāñchi, as in other decidedly post-Mauryan inscriptions, is not without chronological significance.

A comparison of the typical inscriptions on the railings of stūpa I with those on the railings of stūpa II reproduced in Plates III and IV shows that the latter may be somewhat later than the former. Round or roundish *ga* (𑀭𑀸), invariably met with, as we shall presently see, in the later inscriptions, is exceptional in the inscriptions of the railings of stūpas I and II. But a glance at the plates (III and IV) will show that roundish *ga* is met with more frequently in the inscriptions of stūpa II than in the inscriptions on the railing of stūpa I. Advanced forms of two other letters are also met with in the inscriptions of

¹ In the Sāñchi cave inscriptions (Pāṇinīyānī, *Śāṅgīyānī*) we have some regular Mauryan forms like *ra*, and archaic Mauryan *la* made by side. The *ra* of the epigraph appears to be a *la* introduced in time (A. R. R., 1903, p. 113). One only of these three last letters, *la*, occurs three times in the Pāṇinīyānī. All these three *las* are of the regular Mauryan type (A. R. R., 1903, p. 113, and plate).

stūpa II, —*chha* tending towards the later butterfly type with two loops in place of a circle bisected by a vertical line (Pl. IV, Nos. 2 and 4), and *bha* with the right vertical line elongated (Pl. IV, Nos. 7 and 9) below the level of the lower end of the left vertical line. Bühler's inscription No. 18 of stūpa I, recording the gift of the monk Arahaguta, a Sāsādaka, and No. 27 of stūpa II recording the gift of Balaka, a pupil of evidently the same Arahaguta Sāsādaka, may point to the conclusion that there is a distance of a generation between the erection of the railing of the two stūpas, for neither is Arahaguta Sāsādaka named in any of the inscriptions of stūpa II as a donor, nor does his pupil Balaka find mention in any of the inscriptions of stūpa I. Besides the supposed full resemblance between the letters of the inscriptions of stūpa II and those of Aśoka's edicts, another argument adduced by Cunningham and Bühler for concluding "that portions of, or perhaps the whole, railing were erected somewhat later than Aśoka's time," is that stūpa II contained the relics of two contemporaries of Aśoka, of Moggaliputta who presided over the third Buddhist council, and of Majjhima, "the teacher of the whole Himavata." We are not in possession of mechanical copies of the inscriptions on the four steatite boxes found inside the stone relic-box unearthed by Cunningham and Maisey from stūpa II. But an impression of the inscription on the stone relic-box has been lately published by Mr. Pargiter in *Ep. Ind.*, Vol. XII. Two out of our four test letters, *a* and *ra*, occur (each twice) in this record. Both the *as* have considerable space between the arms, and both the *ras* are represented by straight lines. The relics of Moggaliputta and Majjhima might as well have been deposited in stūpa II seven or eight decades after their demise as immediately after, and the ten saints whose relics were enshrined in the stūpa could not have died simultaneously. Bühler could not agree with Cunningham in believing that the ten saints were all contemporaries of Aśoka. The railing of Bharhut, the inscriptions (Pl. V., Nos. 1-19) on which, though mainly resembling those on the railings of Sāñchī stūpas I and II, show a considerable number of advanced forms of *ga* and *bha*, was probably erected at about the same time as the railing of Sāñchī stūpa II or somewhat later. The inscriptions on the remnants of the old railing of Bodh-Gayā (Cunningham, *Mahā-Bodhi* Pl. X, Nos. 2-10), assigned to the middle of the second century B.C. by Bloch,² offer a complicated problem. *Ra* is screw-like and *ga* is angular archaic. But *ka* is advanced in form with the vertical prolonged, and *ma*, *pa*, and *va* with their nearly angular forms appear still more advanced. These inscriptions are probably older than the Bharhut *torāṇa* inscription which is later than the Bharhut reliefs, but not as old as the middle of the second century B.C. Bloch's view that these Bodh-Gayā remnants once formed part of the railing round the Bodhi tree which is represented in a well-known relief of Bharhut, is not supported by palaeography, as these relief epigraphs show forms older than those on the railing of Bodh-Gayā. Probably these inscribed bars, pillars, and coping stones at Bodh-Gayā were added somewhat later than the erection of the Bharhut rail, by Kuraṅgī, wife of Indrāgnimitra, who caused the original railing to be repaired.

¹ *Ep. Ind.*, Vol. II, p. 99.

² *A. S. R.*, 1908-09, p. 147.

advanced forms such as *ta* and *ka* in line 1, *da* and *cha* in line 2, etc. All the votive inscriptions on the south gate are uniformly engraved in what may be termed the regular monumental characters. But two forms of characters are employed in the inscriptions of the two pillars of the west gate. In front of the southern pillar of this gate, above the first panel, the name of the donor Balamitra is engraved in regular monumental characters, while the inscriptions containing the names of the donors of the northern pillar, and, particularly, the imprecatory epigraph that follows, contain a large admixture of irregular advanced forms.

Bühler in his *Indian Palaeography*, as already stated, classifies the later votive inscriptions of the stūpas at Sāñchī with Dhanabhuti's inscription on the *torāṇa* of Bharhut and the Pabhosa cave inscriptions, and designates the alphabet "the Suṅga type of the ancient Brāhmī."¹ Bühler assigns Dhanabhuti's inscription to about 150 B.C. (Tafel II, XVIII). But in the Besnagar pillar inscription of Heliodoros, Ambassador from King Antialkidas, we have now an epigraph that may be assigned to about the middle of the second century B.C. on surer grounds than mere palaeographic evidence. So Bühler's views regarding the date of the Bharhut *tōraṇa* inscription must be reconsidered in the light of this record. A comparison of the alphabet of the Besnagar pillar inscription with that of the Bharhut *tōraṇa* inscription reveals in the latter rounded *ga* (𑀕) in place of angular *ga* (𑀕), *bha* with a long straight vertical line on the right (𑀧) in place of a *bha* with the right vertical line making an angle with the line above (𑀧), mostly straight-lined *ra* (𑀢) in place of screw-like *ra* (𑀢), and some of the letters with upper verticals having *serif* or somewhat thickened tops—all advanced forms indicating that Dhanabhuti erected the *tōraṇa* of the Bharhut stūpa some decades after Heliodoros set up the Garuḍa pillar at Vidiśā. Some of these characteristics, again, such as invariably rounded *ga*, *pa* with the verticals nearly equalised, and letters with upper verticals having thickened tops, indicate that Dhanabhuti's inscription is later in date than the inscriptions on the great railings at Sāñchī and Bharhut. Now a comparison of the alphabet of the Bharhut *tōraṇa* inscription with that mostly employed in the inscriptions of the *tōraṇas* at Sāñchī shows that the *tōraṇas* at Sāñchī must be assigned to a later period than the *tōraṇa* of the Bharhut stūpa. All the *tas* (10 in number) of the Bharhut *tōraṇa* inscription, like the *tas* in the Bēsagar pillar and Maurya inscriptions, have an angular lower part (𑀭), whereas the *tas* of the Sāñchī *tōraṇa* inscriptions have a rounded lower part (𑀭). The solitary *chha* (𑀛) of the Bharhut *tōraṇa* inscription seems to be older in form than the *chhas* (𑀛) of the Sāñchī *tōraṇa* inscriptions. The use of the *serif* and the equalisation of the verticals are commoner in the latter than in the former. The Bharhut *tōraṇa* inscription may be assigned to about the same time as the Besnagar Garuḍa pillar inscription of "the twelfth year after the installation of *Mahārāja Bhāḡavata* (*dvādaśa-vaśābhsīte Bhāḡavate mahārāje.*)"² In this record we come across both rounded and angular *ga*, *ta* with angular lower part, and some *pas*

¹ The Ind. Ant., Vol. XXXIII, App., pp. 32 and 39.

² Journal R. E. R. A. S., Vol. XXII, p. 144; A. E. R. 1913-14, Part II, p. 190. This inscription is discussed and a facsimile of it published in *Memoirs A. S. I.*, No. 5.

and *śas* with the top of the vertical thickened. Professor Bhandarkar rightly identifies this *Mahārāja* Bhāgavata, with Bhāgavata, the ninth king of the Śuṅga dynasty, who reigned for 32 years according to the Purāṇas¹. The twelfth year after the installation of Bhāgavata probably fell about 100 B. C. So it appears reasonable to assign the SāŒchi *tōraṇas* to the first rather than to the second century B. C.

Elsewhere (*Ep. Ind.*, Vol. II, pp. 88-89) Bühler gives other reasons for assigning the inscriptions on the *tōraṇas* of SāŒchi stūpa I to the first half of the second century B. C. While recognising that his Nos. 83 and 201 of stūpa I (Pl. VI, Nos. 2 and 4) "are in the later characters," and his No. 7 of stūpa II (Pl. IV, No. 2) "shows the same characters as Aśoka's inscriptions," Bühler identifies Sēṭh Nāgapiya of the latter inscription with Sēṭh Nāgapiya of the two former records, and endeavours to explain away the difference in the characters by stating, "Such a vacillation is easily explicable, if Nāgapiya lived in the second century B. C." In all these three epigraphs Nāgapiya is called "Aśhāvade Sēṭhi," and this has evidently led Bühler to identify the three homonymous donors. But in the inscription on the western gateway (Pl. VI, No. 2), the donor Nāgapiya is called *Kurardya*, "of Kurara," and in the inscription on the eastern gateway (Pl. VI, No. 4), he is called *Kōrara*, "of Kōrara," whereas no such epithet is used with the name of Sēṭh Nāgapiya of the railing of stūpa II (Pl. IV, No. 2), though five other donors of the same railing have similar epithets attached to their names (Bühler's Nos. 8, 9, 26, 32 and 37). We may therefore conclude that Sēṭh Nāgapiya of stūpa II was very probably not a man of Kurara or Kōrara and not identical with the Aśhāvade Sēṭh Nāgapiya whose name is engraved on two of the *tōraṇas* of stūpa I.

Another reason that has led Bühler to assign the inscriptions on the SāŒchi gateways to such an early date is that in his opinion the characters of the inscription on the south gateway wherein a *śāśa siri Sātākani* is named (Pl. VI No. 1; Cunningham, No. 190) and those of the other inscriptions "are almost identical with those of the Nānāghāt inscriptions." But a comparison of our Plate VI, Nos. 1-4, with the facsimiles of the Nānāghāt inscriptions (*A. S. W. I.*, Vol. V, Pl. LI, Nos. 1-5) shows that this statement is somewhat misleading. The characters of the Nānāghāt inscriptions of the widow of the third Andhra king Siri Sātākani and also of the Nasik inscription of King Kāśa (Krishna) of the Śiṅgāhānakula (Senart, *Ep. Ind.*, Vol. VIII, p. 93, Pl. VI No. 22) differ from those of the inscriptions on the SāŒchi gateways in two essential features:—(1) Letters with the so-called *śeri* or thick-headed vertical are quite conspicuous by their absence in these records. (2) In place of *śas* with the invariably round lower part of the SāŒchi gateway inscriptions, we have, in these earliest Andhra inscriptions, and in the coins of King Siri Sātākani (rightly identified with Siri Sātākani of Nānāghāt), *śas* with acutely angular lower parts. If these two characteristics count for anything, it would be more reasonable to identify Siri Sātākani of the SāŒchi gateway inscription with Sātākani II, the

¹ Smith's *Early History of India*, p. 273.

² Hagen's *Coins of the Śuṅga Dynasty*, p. 1, Pl. I, Nos. 1 and 2.

sixth Andhra king of the Paurāṇik list,¹ whose long reign of 56 years may be assigned to the second and the third quarters of the first century B.C.

The date of this Siri-Sātakani, and consequently that of the south gateway of stūpa I at Sānchī, may also be approximated by working out the date of the Udayagiri (Hāthigumphā) inscription of Khāravēla in which a Sātakani is also mentioned. Bhagavanlal Indraji, who has published what may be called the *editio princeps* of the Hāthigumphā inscription, read and interpreted a sentence in its 16th line to mean that the 13th year of Khāravēla's reign corresponds to the year 165 current and 164 expired of the time of the Maurya Kings. Bhagavanlal was inclined to believe that the era begins with the eighth year of Aśoka, the year in which Aśoka conquered Kalinga, and taking 263 B.C. as the year of Aśoka's accession, placed the accession of Khāravēla in 103 B.C.² While accepting Bhagavanlal's reading and interpretation of the sentence, Bühler pushed back the initial year of the Maurya era to the year of Chandragupta's accession. This theory held the field till Fleet questioned the reading and interpretation of Bhagavanlal and declared, herein followed by Lüders, that "there is no date in the inscription."³ But recently Messrs. Jayaswal and R. D. Banerji have published a revised version of the Hāthigumphā inscription with facsimiles and revived the theory of the Maurya era.⁴ As the sentence has given rise to so much controversy I shall reproduce the different versions:—

Bhagavanlal:—

Prākṛit text.—*Panamtariya saṭhi-vasa-satē rāja-Muriya-kālē vōchhinē cha chōyathā agasatikutariyam ch=upādayati.*

Sanskrit.—*Pañchottarashasthivarshaśatē Mauryarājyākālē vichchinnē cha chatuṣṣha-shṭhyagraśatakottarē chotpādayati.*

English.—“(He) does (this) in the one hundred and sixty-fifth year of the time of Maurya kings after one hundred and sixty-four years had passed away.”

Fleet reads *sacha* for *saṭhi* and takes *panatariyasacha* in the sense of *pañnattariyasachcha*, Sanskrit *prajñāptāryasatya*, and referring to texts propounding some Jain *ariyasachchāni*, “sublime truths.” After *rāja-Muriya-kālē* Fleet reads and translates:—*vōchhinē cha chōyathā a* (or ? *am*) *gasatikatariya ch=upādayati.* *Vōchhinē* (*vjavachchhinnāni*) *chōyattḥam aṅga-sattik-amtariyam ch=upādayati*: “and he produces, causes to come forth (i.e., revives), the sixty-fourth chapter (or other division) of the collection of seven Aṅgas.”⁵

Mr. R. D. Banerji practically follows Bhagavanlal in his reading and rendering of the sentence. He rejects Fleet's interpretation for two reasons: (1) “The original has *agasatikuturiyam* and not *agasatikatariyam* as supposed by Dr. Fleet The *u* mark is very distinct at the right lower extremity of *ta*. This mark is not so very distinct at the end of the vertical line of *ka* but the chisel mark is plain enough.”⁶ But in Pl. IV, attached to Mr. Jayaswal's article, the *u*

¹ Fa-giter, *The Purāṇa Text of the Dynasties of the Kuli Age*, p. 71.

² *Actes du Sixième congrès international des orientalistes*, IIIe, pp. 147, 177.

³ See Lüders' *List*, No. 1345.

⁴ *The Journal of the Bihar and Orissa Research Society*, Vol. III, pp. 425-505, Plates I, II and IV

⁵ J. R. A. S., 1910, pp. 828-27.

⁶ J. B. O. R. S., Vol. III, pp. 492-93.

mark after *t* is not at all distinct, but looks more like a detached dot, and the *u* mark of the *ku* of *kumāra* in line 14 is longer than the *u* mark of Mr. Banerji's *kuturiya*. The *u* mark of *ka* and *ta* is not recognised by Mr. Banerji's colleague, Mr. Jayaswal, who reads *kanituriyānū*. (2) Fleet objects to Bhagavanlal's rendering of *vōchhinnē* as *vichchinnū* (*vichchinnāyīm*) and recognises it as the Jain technical term *vōchchhinne-ryarachechhinnū* applied to the sacred texts which have been "cut off, interrupted," or, in other terms, which have been neglected and lost sight of. Mr. Banerji writes, "The word *vōchchinnū* need not be taken in that technical sense in which it is used in modern Jain literature" and that as *rāja-Muriya-kālē* "shows that a date has been expressed in the same line," "the only possible translation of the word (*vōchchinnū*) is "expired," a meaning derived secondarily from its primary meaning "severed" or "cut" (p. 302). The correct Sanskrit rendering of the Prakrit *vōchhina* (*vōchchhinna*) is *vyarachechhina*, the dictionary meanings of which are, "(1) cut off, rent asunder, torn off; (2) separated, divided, (3) particularised, specified, (4) marked, distinguished; (5) interrupted. (Apte)" In a Jain text, the *Kālpavṛtta* of Bhadrabāhu¹, the word is thus used:—

(1) *Nāyā pīṣṭabandhanē vōchchhinne* (*Jinacaritra*, 127) Sanskrit commentary:—*Jñātaḥ kī Mahāvīraśchaye prēmabandhanam vyarachechhinnū tadat*, "Having cut asunder the tie of friendship which he had for the seion of the Jñātri clan"

(2) *Vōchchhinna-dōhālī* (*Jinacaritra*, 95) "A pregnant woman whose desires have been fulfilled."

(3) *Atasēd ganadhārē nirarachechhā vōchchhinne* (*Sihacintāli*, 2) "The rest of the Ganadharas died leaving no descendants."

Such examples of the use of *vōchchhinna* as these do not warrant us in holding that *vōchhina* (*vyarachechhina*) may also be used in the sense of a year being ended. In Indian epigraphic records *gata* or *atita* is used to denote the expired year, but *vyarachechhina* is nowhere else used in this sense. In the early Brāhmī and Kharoṣṭhī inscriptions of Northern India the date is expressed by *samvatsarē* or *vatsarē* or briefly by *sām* or *sa*, and in the Brāhmī inscriptions of Western and Southern India by *tasē*, *vatsarē*, *samvatsarē* or its variants, but never by any terms like *rāja-Muriya-kālē*. The mention again of both the expired and the current years of the same era side by side is both unique and superfluous. Evidently to avoid this difficulty and to provide the verb *upādāyati* (*upādāyati*) with an object, Mr. Jayaswal proposes to read and translate the second part of the sentence as follows:—

chāḍ-gaṭhī Argam ti khandariyā upādāyati

"The cave (*kandari*, *kandara*), of six poles, called the *arkhā* (Skt. *ardha*) is made

But Plate IV attached to Mr. Jayaswal's article shows that the reading *chāḍ-gaṭhī* for *chāḍgaṭhā* is impossible. As regards the next word *argam*, in a Prakrit inscription the language of which is so much akin to Pāli, compound *argam* is phonetically impossible, and the mark on the left side of *ga* in Mr. Jayaswal's Plate cannot be mistaken for the superscript *e*. The mark of *es* also is visible in the facsimile, and Bhagavanlal and Banerji failed to notice it on the rock.

¹ Jacoff's edition, Leipzig, 1879 (*Abhandlungen für die Kunde des Morgenlandes*, VII, Band, 2a, 1).

² *Id.* p. 112.

The reading of the first part of the sentence is even more uncertain. The word between *panatariya* and *rāja-Muriya-kālē* is enigmatical. In the facsimile the letter after *sa* looks rather like *cha* or *chi* and the next letter is evidently *ta* and not *va*, for the lower part of it consists of a semi-circle opening below instead of a circle. The three letters that follow *ta* looks like *satato*. But whatever may be the correct reading or meaning of *sachi* (*cha*) *ta sa ta to*, no date can be denoted by this group of letters.¹

Mr. V. A. Smith works out the date of Khāravēla in a different way. In line 6 of the Hāthigumphā inscription occurs this sentence.

Pañchamē cha dāni vasē Na(m)da-rāja-tivasasata-ō(ghā?)ṭitam Tanasuliyavāṭā panāḍim nagaram pavēsa.....

Dr. Lüders translates this sentence thus:—"In the fifth year he had an aqueduct (*panāḍi*) that had not been used for 103 years since king (*rājan*) Nām̐da (or since the Nām̐da Kings?) conducted into the city." Mr. V. A. Smith writes, "If we assume 322 B.C. as the end of the Nām̐da dynasty, the fifth year of Khāravēla would be 103 years later, namely 219 B.C., and his accession should be placed about 223 B.C." But the wide difference in form between the alphabet of the edicts of Aśoka on the one hand and that of the Hāthigumphā inscription on the other, already noted by Bhagavanlal, renders this estimate of Khāravēla's date quite untenable. The most notable characteristics of the Hāthigumphā alphabet are:—(1) A considerable number of letters with thick-headed vertical or *serif*; (2) *ka* with the lower part of the vertical prolonged; (3) invariably rounded *ga*; (4) *chha* of the butterfly type with two loops; (5) *tas* having in most cases rounded lower part. These characteristics that the Hāthigumphā inscription shares, to a considerable extent, with the inscriptions on the Sāñchī gateways, indicate that this epigraph is later in date not only than Aśoka's edicts and the Besnagar Garuḍa pillar inscriptions, but also later than the Bharhut *tōraṇa* inscription, and the Nānāghāt inscriptions of the time of the Andhra King Siri Sātakaṇi I. Therefore Sātakaṇi mentioned in the Hāthi-

¹ Since the above was in type Mr. Jayaswal has published in J. B. O. R. S., Vol. IV, Part IV, a second article entitled *Hāthigumphā Inscription revised from the Rock* (pp. 304-403), wherein, in place of *thambhe patiḥāpayati* [s] *Pān-antariya-sāthi-vasa-sate Rāja-Muriya-Kālē vachhinecha chheyathi Argasi ti kamtariyam upādiyati* in line 10, he now proposes to read, *thambhe patiḥāpayati* [,] *pānatariya sata-sahasehi* [,] *Muriya Kālam vachhinam* (*neh* ?) *Rāja shewa* that the old reading is very doubtful. But it is also difficult to accept Mr. Jayaswal's new reading, particularly he instead of *rāja*, as against the reading of B vanlal and Mr. R. D. Jayaswal. (a) The substitution of *sata-sahasehi* for *sāthi-vasa-sate* of whom examined the rock. The elimination of the term *Muriya-Kāla* as a royal era still more difficult. (b) Mr. *Muriya-Kāla* is also open to objection. He translates it, , and being of an interval of sixty-four with a century " even more far-fetched than 'expired.' The particle *cha* g the substantive *Muriya kālam*. Even if we ting a date. Still more unusual is the state- is how Mr. Jayaswal takes it to be by treat- Mr. Jayaswal proposes to derive *upādāyati* of *upādāyati* as 'completes' is also very etes the Muriya time (era) " Khāravēla , as Cheta's princes are mentioned in the old complete the era of another line.

gumpha inscription, without taking heed of whom Khāravēla sent a large army to the west in the second year of his reign, should also be identified with Sātākarni II whose reign may be tentatively dated between B.C. 73-20. The rise of Sātākarni II and Khāravēla probably synchronised with the fall of the Śunga dynasty and the consequent weakening of the power of Magadha. Sātākarni II evidently claimed some sort of suzerainty over the states that lay to the west of Kāliṅga and consequently Khāravēla's expeditions to the west involved defiance of the Andhra power. His later expeditions were led to the north. In the eighth year Khāravēla raided Magadha and compelled the king of Rājagṛha (Rājagṛha) to retire to Mathurā. In the twelfth year he again invaded Magadha and made the Magadha king bow at his feet.

One grave objection to this calculation of the date of Khāravēla based on palaeographic considerations is *ti-rasa-sata* in the clause *Nandantiya tirasasata oṣṭam*. Bhagavanlal reads it as *tirasa-sata* and Mr. Jayaswal as *ti-rasa-sata* (sh?) and evidently Dr. Lüders also does the same and translates it as "103 years." Stems *sata* (hundred) and *sahasā* (1,000) take plural suffixes in the edicts of Aśoka as well as in the Hathigumpha inscription when denoting plurality of hundreds or thousands. In the Rock Edict I we have *rahuni yajñasatasahasāni*, "many hundred thousand animals;" in the Rock Edict IV, *rahuni caturāśvāni*, "many hundreds of years."

Hathigumpha inscription:—

- L. 4. *panatisthi satasahasāhi*, "by 3,300,000."
L. 7. *anekāni satasahasāni*, "many hundreds of thousands."
L. 10. *aphatisa satasahasāhi*, "by 3,800,000."

If the reading is *ti-rasa-sata*, it must denote 103 and not 200. But, as the facsimile shows, there is no anusvara sign either above or beside the final *ta* of *tirasasata*. The absence of *riḍhakti* (suffix) after *tirasasata* is due to the fact that it forms part of a compound word, *Nandantiya-tirasasata* (*ghāṭi*) *śiṅga* qualifying *panḍit* (aqueeduct). An objection that may be made to such a construction is that *tirasasata* and *aphatisa* are not combined according to the rule of Sandhi. But this is not the only instance in which the writer of this epigraph has ignored the rules of Sandhi in writing a compound word. In the first line we have *chaturmūḍa-ghana-guṇa-up* (*śiṅga*) Bhagavanlal and Jayaswal read *gunopagatā*. But in the facsimile the letter after *ga* looks more like *pa* than *no*, and the two letters after *na* are *upa* and not *upa*. So here *pa* and *u* have not been combined. The non-elision of *a* of *guṇa* and *sata* may be due to the fact that in both cases it is followed by verbs beginning with a vowel. *Tirasasata* as a part of the compound may mean either 200 or 103 years. If we take it in the sense of "200 years," the whole compound denoting, "made by king Nandika 200 years before," the historical evidence contained herein agrees well with the indications of palaeography. Mr. Knerji proposes to identify this Nandantiya with Nandivardhana, the ninth king of the Śiṅga dynasty. There is nothing in the Purāṇas, our only sources of information for Nandivardhana, to show that he ever had anything to do with Kāliṅga. On the contrary we are distinctly told in the Purāṇas that when

of the Śiśunāga dynasty and their predecessors were reigning in Magadha, 32 Kalingas, that is to say, 32 kings, reigned in Kalinga in succession synchronously. It is not Nandivardhana but Mahāpadma Nanda, son of Nandivardhana's son Mahanandin by a Śūdra woman, who is said to have brought "all under his sole sway" and "uprooted all Kshatriyas" or the old reigning families. So we should identify Nandarāja of the Hāthigumphā inscription who held possession of Kalinga either with the all-conquering Mahāpadma Nanda or one of his sons. According to the Purāṇas Mahāpadma Nanda lived or reigned for 88 years and his 8 sons in all reigned 12 years.¹ A total reign of 12 years for eight sons indicates confusion. So it appears more reasonable to identify the Nandarāja of the Hāthigumphā inscription with Mahāpadma Nanda than with any of his sons. The last Nanda was overthrown by Chandragupta the Maurya in about 321 B.C. Assuming that Mahāpadma Nanda reigned for 50 years—not an inordinately long period for a monarch who reduced all the ancient kingdoms of Northern India to subjection,—we have $321+12+50=383$ B.C. as the year of his accession; and, further, assuming that the author of the Hāthigumphā inscription, in putting down "300 years" as the interval between Nanda's rule in Kalinga and the fifth year of Khāravēla has used a round number, we may put down the accession of Khāravēla to about 70 B.C. and that of Sātakarṇi II a few years earlier.

A similar conclusion regarding the date of the Sāñchī *tōraṇa* inscriptions may also be arrived at by working backward from the alphabet of the Sāñchī image inscription of the year 28 of Shāhi-Vāsishka (*Ep. Ind.*, Vol. II, p. 369 and Plate; *A. S. R.*, 1910-11, Pt. II, p. 42), and inscriptions of the time of Kanishka and of the great satrap Śōdāsa. All records of the time of Vāsishka and other Kushan kings are evidently dated in the era of Kanishka. There is a great divergence of opinion among scholars regarding the initial year of this era. Most authorities tentatively put it down at 78 A.D. But according to Fleet, "Kanishka certainly founded the Mālava-Vikrama era, commencing B.C. 58," while Sir John Marshall places the accession of Kanishka in about 125 A.D.² If the question of the age of Kanishka, like that of Khāravēla, admits of such wide differences of opinion fluctuating within a range of about two centuries, indications of palaeography must be considered valueless for settling chronological problems. Palaeography will not enable one to discriminate between such narrow limits as 78 and 125 A.D., but it certainly proves that Fleet's view is based on an erroneous arrangement of the order and dates of the different varieties of the Brāhmī alphabet. A comparison of the alphabet of the Kushan inscriptions (Pl. VI, Nos. 7 and 8) on the one hand, and that of the Mōra and the Mathurā inscriptions of the time of Śōdāsa (Pl. VI, Nos. 5 and 6) on the other, with the alphabet of the Girnar inscription of Rudradāman of A.D. 150,³ indicates that Śōdāsa's inscriptions must be assigned to an earlier age than the inscriptions of Kanishka.

¹ Pargiter's *Purāṇa Texts*, p. 619.

² *A Guide to Taxila*, Calcutta, 1918, p. 22.

³ *Ep. Ind.*, Vol. VIII, Plate.

⁴ Eye copies only of the Mathurā (Jail Mound) stone-slab inscription of the time of Svāmin Mahākshatrapa Śōkha are now available. The whereabouts of the stone is not known. For reference see Lüder's *List*, 82.

1. The base-line of *na* is straight (┐) in the inscriptions of the time of Śoḍāsa as in decidedly earlier inscriptions. In the inscriptions of Kanishka Vāṃśika, Huviṣka and Vāsudeva (*Ep. Ind.*, Vol. I, Mathura Inscriptions, with Plates, etc.) as well as in the Gīmar inscription of Rudradāman (*Ep. Ind.*, Vol. VIII, Plate facing p. 44) we come across a new type of *na* with curved base-line (┐)

2. The *ya* of the inscriptions of the time of Śoḍāsa differs from the *ya* of the oldest Brāhmī inscriptions in having equalised verticals. But in the inscriptions of Kanishka and his successors, in the Gīmar inscriptions of Rudradāman and in the early Gupta inscriptions, the *ya* has a hook or a circle on the left limb (┐) and an angular right limb. So the Mathurā inscription of Śoḍāsa should be assigned to a date earlier than the beginning of the era of Kanishka. Sir John Marshall places the reign of Śoḍāsa between A.D. 10 and 20¹

Fleet, on the contrary, places the dated Brāhmī inscriptions of the Indo-Scythian period in the following order,—Kanishka, (Vāṃśika), Huviṣka, Śoḍāsa and Vāsudeva.² His reasons for doing so may be gathered from the following extract from his contribution to the discussion on the date of Kanishka —

"The fact is, palaeographic inquiries are a rather complicated business. They require not only a knowledge and use of the published tables, but also a close scrutiny of the records themselves. And the difficulties attending them, and the necessity of not accepting apparent results too quickly, are well illustrated by the point that Mr. R. D. Banerji, who went into this branch of our study somewhat deeply, could not account for the Mathurā inscription of the year 229, except by referring its date either to a Maurya era which never existed, or else to the Selucidan era, which was never used in India, or else to some other era (not specified by him) beginning in the third or fourth century B.C. But I must not be understood as decrying the value of Mr. Banerji's inquiries: while there are various points in which we cannot at all accept his results, he has done some very useful work in this line; especially in bringing out the point that the Jain Brāhmī inscriptions of the Kushan period, as compared with the Buddhist and Brahmanical inscriptions, show decidedly advanced forms, which seem due, as suggested by him, to the mercantile habits of the Jains, creating a tendency to abandon archaic forms of writing and adopt a more cursive style."³

The inductions embodied in my present paper are based not on the "published tables," but on a "scrutiny of the records themselves," and the accompanying plates are intended to help students to draw their own conclusions by following the same method. The complicated character of palaeographic inquiries is due to the fact that in inscriptions on metal or stone engraved by the hand of man we are likely to meet with both regular monumental and irregular forms of different letters, and among the irregular letter-forms some may approach the more archaic type and others the current advanced forms used in the transactions of every day life. As Bühler writes, "In accordance with the results of all palaeographic research, the epigraphic alphabets are mostly more archaic than

¹ *A Guide to Taxila*, p. 31.

² *Ind. Ant.*, Vol. XXXIII, pp. 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000.

³ *J. E. A. S.*, 1912, pp. 271-74.

those used in daily life, as the very natural desire to employ monumental forms prevents the adoption of modern letters, and as, in the case of coins, the imitation of older specimens not rarely makes the alphabet retrograde."¹ In palaeographic inquiry, therefore, the most difficult part is the selection not only of the test letters, but of the test forms,—the regular contemporary monumental forms. For ascertaining the relative chronological position of the Sāñchī gateway inscriptions, inscriptions of the time of the Śaka satraps, and the Kushan inscriptions, I have chosen two test letters, *na* and *ya*. The peculiarly Kushan forms of such letters,—*na* with a curved base-line and *ya* with a hook or a circle on the left limb and an angular or nearly angular right limb—are met with not only in the Mathurā Jaina inscriptions of the time of Kanishka and his successors, but also in the Buddhist and Brahmanic inscriptions of the time of Kanishka and Vāsishka, such as the British Museum stone inscription of the 10th year of Kanishka (*Ep. Ind.*, Vol. IX, p. 240 and Pl.), Saheth Maheth image inscription of the year 19 of the reign of Kanishka (*Ep. Ind.*, Vol. VIII, p. 181 and Pl.), and the Isāpur sacrificial post inscription of the year 24 (A. S. R., 1910-11, Pt. II, p. 41, and Pl. XXIV), and Sāñchī inscription of the year 28 of the reign of Vāsishka. In the Sarnath inscription of the year 3 of Kanishka also all the *yas* and some of the *nas* are of the regular Kushan monumental types (*Ep. Ind.*, Vol. VIII, p. 176 and Plate). Judged by these tests the Mathurā inscription of the year 299 (*Ind. Ant.*, Vol. XXXVII, p. 33, Pl. III) having *nas* with curved base-line but *uas* of the pre-Kushan type may be assigned to the time of some predecessor of Kanishka who was called *Mahārāja* and *rājātirāja* but not *dēva-putra* like Kanishka and his successors. May this *mahārāja rājātirāja* be Kadphises II, who, as his coin legends show, had assumed these titles?

As the forms of *na* and *ya* show that the Brāhmī inscriptions of the time of Śōḍāsa are earlier than the inscriptions of the time of Kanishka, other test forms, such as the angular forms of *gha*, *pa*, *ma*, *va*, *la*, and *ha*, and broadened form of *bha*, met with in both these classes of epigraphs, but not in the records of the Maurya and Śuṅga periods, as well as in the inscriptions on the Sāñchī *tōraṇas*, indicate that the latter (the Sāñchī *tōraṇa* inscriptions) are considerably older than the inscriptions of the time of Śōḍāsa.

To sum up, the Brāhmī inscriptions from the third century B.C. to the second century A.D., may be chronologically arranged in the following order:—

1. Edicts of Aśoka.
2. Nāgārjunī Hill cave inscriptions of Aśoka's grandson Daśaratha.
3. Besnagar Garuḍa pillar inscriptions.
4. (a) Inscriptions on the railings of Stūpa I at Sāñchī.
 (b) Inscriptions on the railings of Stūpa II at Sāñchī.
 (c) Bharhut railing inscriptions.
 (d) Inscriptions on the remnants of the old Bodhi-Gayā railing.
5. (a) Besnagar Garuḍa pillar inscription of the year 12 after the installation of *mahārāja Bhāgavata*.

¹ *Indian Palaeography*, p. 30 (Sec. 14).

(b) Inscription of Nāyanikā, widow of the Andhra king Śātakaṇi I in the Nānāghāt cave.

(c) Bharhut *tōraṇa* (gateway) inscription.

6. Hāthigumphā inscription of Khāravēla, king of Kāliṅga.

7. Sāñchl *tōraṇa* inscriptions.

8. Inscriptions of the time of Śāliśa.

9. Inscriptions of the time of Kanishka.

The conclusions arrived at above as to the relative ages of these early monuments would perhaps carry conviction enough if they were based on considerations of palaeography alone; but when we find that they are borne out by another and wholly independent line of evidence, then the conviction of their correctness becomes almost a certainty. It was Sir John Marshall who first essayed a serious critical analysis of the sculptures carved upon these monuments, and used their style and technique as criteria to determine their date.

Sir John Marshall's results were embodied in an essay entitled "A Sketch of Indian Antiquities" destined for the forthcoming *Cambridge History of India*, Vol. I, which was in proof in 1914 but the publication of which has been postponed by the war. From the primitive image of Parkham (now in the Mathura Museum) and the "memory reliefs" of Bharhut the author traces the history of early Indian art step by step through the first four centuries of its evolution. The sculptures on the railing of the Bharhut stūpa he assigns to the middle of the second century B.C., and those on the gateway to a later date; the original sculptures on the ground rail of Stūpa II at Sāñchl to about the same time; the railing of Bodhi Gayā to the earlier years of the first century B.C.; the sculptures in the Mañchapurī Cave at Udayagiri, in the upper story of which the inscription of Khāravēla's queen is incised, to a date considerably posterior to the sculptures of Bharhut; the reliefs on the four gateways of Sāñchl to the latter half of the first century B.C.; and the sculptures of the time of the Śāka Satraps of Mathurā to about the beginning of, or a little before, the Christian era.

It is very gratifying to note that these conclusions of Sir John Marshall, who initiated the present inquiry and impressed upon the author the necessity of working out the dates of the ancient monuments of India from palaeographic indications afresh and without preconceived notions in the light of otherwise dateable documents that have become known since Bühler wrote his *Indian Palaeography* are in substantial agreement with those set forth in this Memoir. It is to be hoped that the use of the style and technique of sculptures as criteria for determining the dates of the Indian monuments of the later periods will yield as good results and help us to place Indian monumental history on a firmer basis.

APPENDIX.

PLATE I.

Nāgārjunī Hill Cave Inscriptions of Daśaratha. (Bühler, *Ind. Ant.*, Vol. XX, 1891, pp. 364-365.)

I.

1. Vahiak [ā] Kubhā Dashalathēna¹ devānaṁpiyēna
2. anamṭaliyaṁ abhishitēnā [Ājivikēhi].
3. bhadaṁtēhi vāsha nishidiyāyē nishiṭhē
4. a-chaṁdama-shūliyaṁ

II.

1. Gōpikā Kubhā Dashalathēna dēva [na] ṁpi-
2. yēnā anamṭaliyaṁ abhishitēnā Āji-
3. vikē [hi bhadaṁ] tēhi vāsha ni [shi] diyāyē
4. nishiṭhā a-chaṁdama-shūliyaṁ

III.

1. Vaḍathikā Kubhā Dashalathēnā dēvānaṁ
2. piyēnā ānamṭaliyaṁ abhishitēnā
3. [Ājivi] kēhi bhadaṁtēhi va [sha-ni] shidiyāyē
4. nishiṭhā a-chaṁdama-shūliyaṁ

PLATE II.

Besnagar Pillar Inscription of Heliodoros. (For the latest version see Rapson's *Ancient India*, Cambridge, 1914, p. 157.)

I.

1. Dēvadēvasa Vā [sudē] vasa Garuḍadhajē ayaṁ
2. Kārītē i[a] Heliōdōrēṇa bhāga-
3. vatēna Diyasa putrēṇa Takḥkhasilākēna¹
4. Yōna-dutēna āgatēna mahārājasa
5. Amṭalikitasa upā[m]tā sakāsam rañō
6. Kāsiput[r]asa Bhāgabhadrasa trātārasa
7. Vasēna [chatu] dasēṁna rājēna vadhamānasa

PLATE III.

Typical Inscriptions from the ground railing of Stūpa I at Sāñchi.

No. 1.

(Bühler, *Ep. Ind.*, Vol. II, p. 104, No. 66.)

L. 1. Dēvagirinō pachanēkayikasa

L. 2. bhichunō sa atēvāsika sa Khaṇō

¹ The double consonant, *kkha*, is remarkable. In literary Prakṛits an aspirate is doubled by prefixing the non-aspirated sound : as *kkh*.

No. 2.

(*Ibid*, p. 376, No. 184.)

aya-Dhanakasa bhichhunö dānam

No. 3.

(*Ibid*, p. 104, No. 69.)

Ujēniyē Agisimayē dānam

No. 4.

(*Ibid*, p. 99, No. 18.)

Arahagutasa Sāsādakasa bhichhunö dānam

No. 5

(*Ibid*, p. 385, No. 266.)

thērasa aya-Nāgasa bhichhunö Ujēnakasa dānam

No. 6.

(*Ibid*, p. 113, No. 51.)

L. 1. sāmanērasa Abēya-

L. 2. kasa seṭhinö dānam

No. 7.

(*Ibid*, p. 98, No. 10.)

Aṭhasa kaṭṭimikasa dānam

No. 8. .

(*Ibid*, p. 109, No. 112.)

L. 1. Yakkhāsa bhichhunö aya-Dēvagirinö ntē-

L. 2. vāsiniö dānam

No. 9.

(*Ibid*, p. 103, No. 53.)

Nadigutasa dānā bhichhunö

No. 10.

(*Ibid*, p. 105, No. 153.)

Jōṇhakasa bhichhunö dānam

No. 11.

(*Ibid*, p. 379, No. 208.)

aya-Jētasa bhichhunö dānam

No. 12.

(*Ibid*, p. 108, No. 103.)

Pasayē bhichhuniyē Nadinagarikayē dānam

PLATE IV.

Typical Inscriptions from the Railings of Stūpa II at Sāñchī.

No. 1.

(*Ibid*, p. 112, No. 13.)

Agilasa dānam Adhapōrikasa

No. 2.

(*Ibid*, p. 111, No. 7.)

L. 1. N[ā]gapiyasa Achhā[v].

L. 2. sa seṭṭhisa dānam

No. 3.

(*Ibid*, p. 397, No. 27.)

L. 1. Balakasa ayasa Arahagutasa Sāsā-

L. 2. dakasa atēvasinō dānam

No. 4.

(*Ibid*, p. 398, No. 39.)

L. 1. Sagharakhitasa bhichhunō dānam Kōrara-

L. 2. sa

No. 5.

(*Ibid*, p. 398, No. 36.)

Arahakasa bhichhunō bhāpakasa dānam

No. 6.

(*Ibid*, p. 112, No. 14.)

Yasōgirinō dānam bhichhunō

No. 7.

(*Ibid*, p. 111, No. 4.)

Isilasa bhikhunō dānam

No. 8.

(*Ibid*, p. 111, No. 10.)

Nāgapālītaya dāna thabhō

No. 9.

(*Ibid*, p. 400, No. 53.)

L. 1. Nadinagarā

L. 2. Asad[e]vaya bhikhuya dana

No. 10.

(*Ibid*, p. 308, No. 38.)

Nāgarakhitasa bhikkhunō Pōkhareyakasa dānañ

PLATE V.

Typical Inscriptions from the Railing of Bharhut

No. 1.

(Hultzsch, *Ind. Ant.*, Vol. XXII, pp. 227-242, No 122)

aya-Apikakasa dānañ

No. 2.

(*Ibid*, No. 25.)

aya-Gōrakhitasa thabbō dānañ

No. 3.

(*Ibid*, No. 141.)

Avisanasa dānañ

No. 4.

(*Ibid*, No. 81.)

L. 1. Mōragiriñha Nāgilāyā bhikkhunīyā dānām thabbō

L. 2. Bhagavatō Vipasīnō bōdhi

No. 5.

(*Ibid*, No. 85.)

L. 1. Vēdisā Anurādhiyā dānam

L. 2. Chhadamtiya jātakam

No. 6.

(*Ibid*, No. 97.)

L. 1. Māharasa aṇṭevāsīnō aya-Sāma-

L. 2. kasa thabbō dānam

No. 7.

(*Ibid*, No. 133.)

Jēṭhabhadrasa dānañ

No. 8.

(*Ibid*, No. 30.)

Bhagavatō Kōṇāgamēnasa bōdhi

No. 9.

(*Ibid*, No. 135.)

Budharakhitasa rupākarakasa dānam

No. 10.

(Ibid. No. 60.)

L. 1. Ērapatō Nūgarāja

L. 2. Bhagavatō vadatō

No. 11

(Ibid. No. 69.)

bhadata-Maṇḍiāsa thabhō dānam

No. 12.

(Ibid. No. 27.)

L. 1. Dabhinikāya Mahamukhisa dhitu Badhika-

L. 2. ya bhichhuniya dānam

No. 13.

(Ibid. No. 98.)

Bhagavatō ūkraṁti

No. 14.

(Ibid. No. 45.)

aya-Isadinasa bhānakasa dānam

No. 15.

(Ibid. No. 10.)

Karabakata-nigamasa

No. 16.

(Ibid. No. 38.)

Jētavana Anādhapēdikō dēti kōtisamthattēna kētā

No. 17.

(Ibid. No. 84.)

Bhagavatō Kakusadhasa bōdhi

No. 18.

(Cunningham, Stūpa of Bharhut, p. 141, No. 46.)
Agirakhitasa Bhōjakatakasa suchi dānam

No. 19.

(Hultzsch, Ind. Ant., Vol. XXII, pp. 227-242, No. 101.)
Kākamdiya Sōmāya bhichhuniya dānam

No. 20.

(*Ibid*, No. 1.)

Bharhut Toraya Inscription.

- L. 1. Suganani raje rāṇo Gāghiputasa Visadēvasa
- L. 2. pantēna Gōti-putasa Āgarajusa putēpa
- L. 3. Vachiputēna Dhanabhūtinā (kāritani toranani
- L. 4. silā-kāṣṭhamiṇi cha upani na

No. 21.

Sāñchi Stūpa I, Western Gate.

(Bühler. E. I., Vol II, p. 100, No. 88

aya-Chudasa atēvāsini Balamitrassa dāna thabbhō

No. 22.

Sāñchi Stūpa I, South Gate.

(*Ibid*, p. 378, No. 200.)

Vēdisakēhi dāritakārēhi rupakaniṇarā katani

PLATE VI.

No. 1.

Sāñchi Stūpa I, South Gate.

(Lüder's List, No. 310.)

- L. 1. rāṇo siri-Sātakanisa
- L. 2. āvēsanisa Vāsīthiputrasa
- L. 3. Ānamdasa dānani

No. 2.

Sāñchi Stūpa I, West Gate.

(Bühler, Ep. Ind., Vol. II, p. 378, No. 201.)

Kurarāya Nāgapriyasa Achhāvade sethisa putasa cha Soghassa [dāna-n] thabbhō

No. 3.

Sāñchi Stūpa I, North Gate.

- L. 1.kapālakarisa vēmalapaḍi (r)
- L. 2.riya kārakāna cha gati-gachhīya yō ito

No. 4.

Sāñchi Stūpa I, East Gate.

(Ep. Ind., Vol. II, p. 100, No. 83.)

Kōrassasa Nāgapriyasa Achhāvade sethisa dāna thabbhō

No. 5.

Mōrā stone-slab inscription.

(Vogel's *Catalogue of the Archaeological Museum at Mathura*, p. 184.)

- L. 1. Maha[ksha]t(rapasa Rājūvulasa putra).....
 L. 2. Bhagavatā Vri(sh)ne(na pañcha Virūnām pratimā śailatṛivagra).
 L. 3. yastoshayā ś(ni)le (śrīmadgrahamatula muda-dhasa)....
 L. 4. archā daśam śailam pachaivala(ta iva parama vapusha)....

No. 6.

Mathurā (Kaṅkāli Tilā, now Lucknow Provincial Museum.)

Inscription of the time of Śōḍāsa of the year 72.

(Bühler, *Ep. Ind.*, Vol. II, p. 199; *Ep. Ind.*, Vol. IV, p. 55.)

- L. 1. nama arahatō Vardhamānasa
 L. 2. sv[ā]misa mahakshatrapasa Śōḍāsasa savatsarē 70 2 hēmanitamāsē
 2 divasē 9 Haritiputrasa Pālasa bhayāyē samasāvīkāyē
 L. 3. Kōchhiyē Amohiniyē sahā putrēhi Pālaghoshēna Pōḥhaghoshēna
 Dhanaghoshēna Āyavati pratihāpitā prāya-[bha]-
 L. 4. Āyavati arahatapujāyē

No. 7.

Mathurā (Kaṅkāli Tilā, now Lucknow Provincial Museum)

Jaina image inscription of the time of Kaṇishka of sam 5

(Lüders, *Ind. Ant.*, Vol. XXXIII, p. 35/.)

- A. L. 1. Dēvaputrasya Ka[ni]shkasya sa[m] 5 hē 1 di 1 ētasya pūrv-
 v[ā]yam Kottiyātō gaṇātō Bahmadāsikātō [ku]-
 L. 2. lātō[U]chēnāgaritō śākhātō Sēthi[ni]ha]..sya śi[ś]ini Sēnasya
 sadhachari Khudāyē nirva[r]ta[nā]
 B. L. 1. Pālasya dhita.....ya.....ū.....
 L. 2. Vādhamanasya prati[mā].....

No. 8.

Mathurā (Kaṅkāli Tilā, now Mathurā Museum) Jaina image inscription of the time of Kaṇishka of sam 7. (Bühler, *Ep. Ind.*, Vol. I, p. 391.)

- L. 1. [siddham] mahārājasya rūjātirājasya dēvaputrasya shāhi-Kaṇishkasya
 sam 7 hē 1 di 105 ētasya pūrvvāyām Aryyodēhikiyātō
 L. 2. gaṇātō Aryya-Nāgabhutikiyātō kulātō gaṇisya Aryya-Buddhaśirisya
 śishyō vāchakō Aryya-Sa[ndhi]kasya bhagini Aryya-Jayā, Aryya
 Gōshthā.....

Memoirs of the Archæological Survey of India, No. 1.

ERRATA.

Page 5, line 10,—for *he* read *the*

„ „ lines 3—4 from bottom,—for (“These gates and the railings are entrusted to the care of the artisans of the five cities”), read “(These gates and the railings are) entrusted to the care of the artisans of the five cities”.

„ 7, line 1,—for *sas* read *sa s*.

„ 10, Note 1, line 3,—for *vachhinecha* read *vochhinecha*.

„ „ „ „ „ „—for *kahlariyan* read *kanhlariyan*

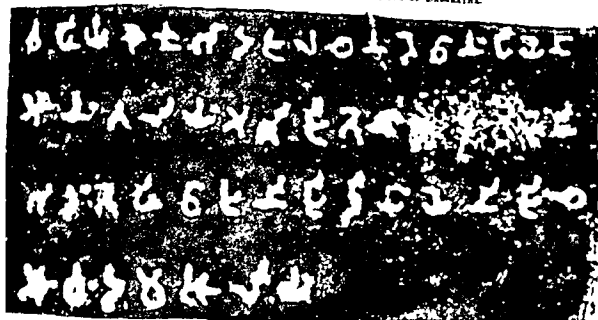
„ „ „ „ „ 5,—for *choyathi* read *choyaphi*.

„ „ „ „ „ 7,—for *he* read *hi*.

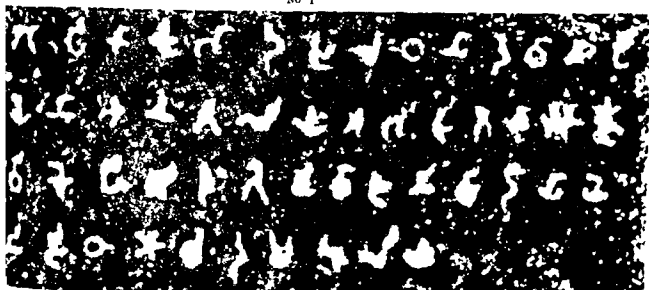
„ „ „ „ „ 2 from bottom,—for (No. 5) read (No. 517)

„ 12, last line,—for *Somsa* read *Somdusa*

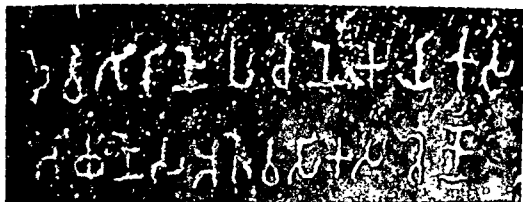
„ 11, line 11,—for *Sahethi Maheth* read *Saheth Maheth*.



No 1



No 2



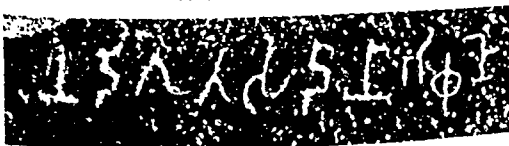
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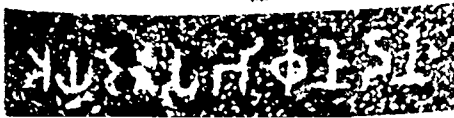
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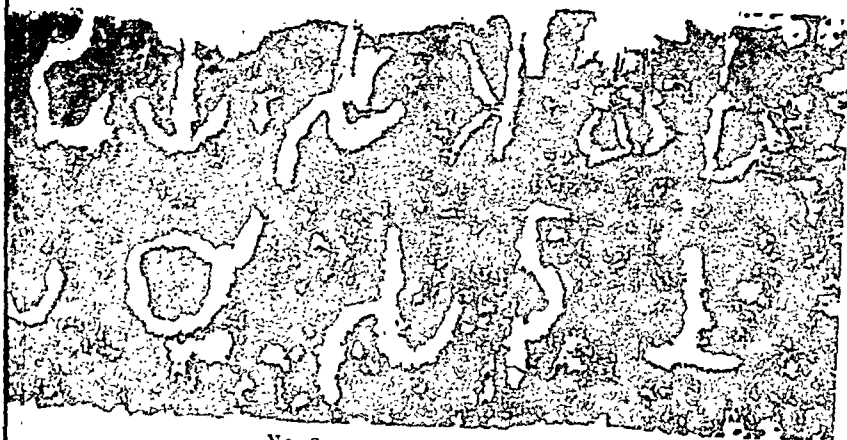


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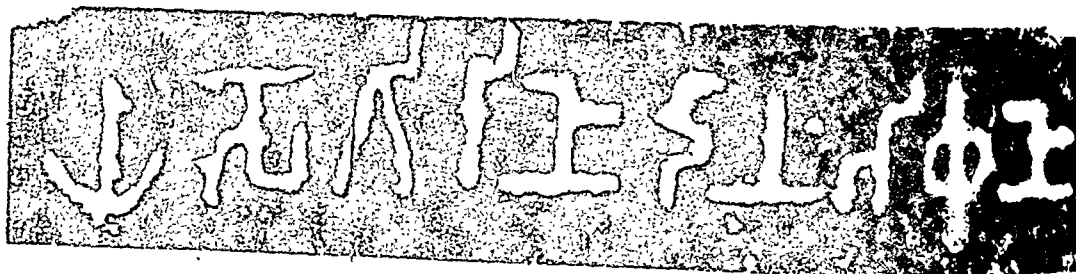
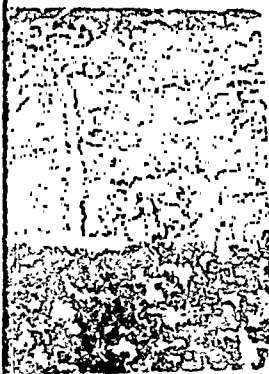
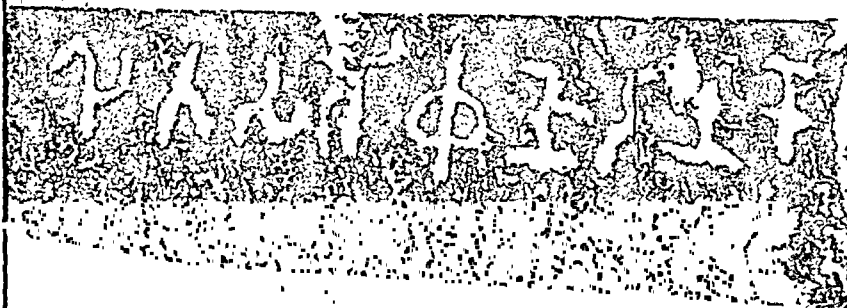


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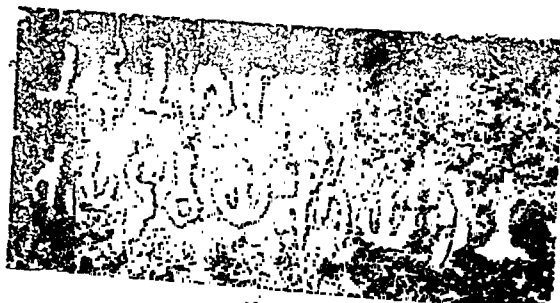
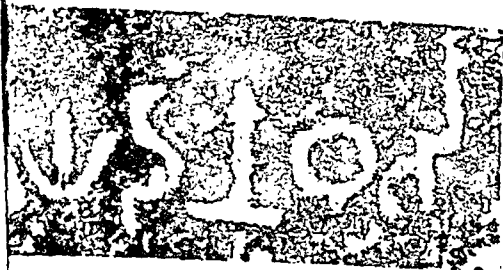




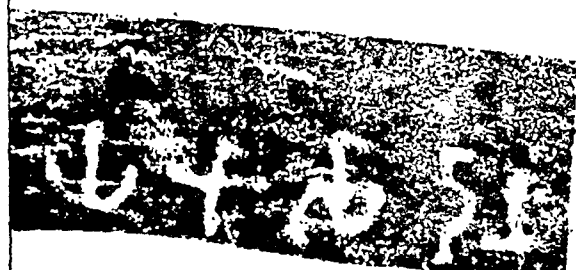
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NO 22 BANCHI STUPA 1 SOUTH GATE

॥ श्रीगणेशाय नमः ॥

NO. 21 SANCHI. STUPA I WESTERN GATE